

CLAIMS

1. Method to reproduce, on at least one client terminal, at least one data flow comprising a plurality of encoded entities, each associated with at least one composition time stamp, said method comprising steps  
5 consisting of :

- decoding said flow(s), so as to obtain at least one decoded flow comprising a plurality of decoded entities ;

- composing said decoded entities, at the times  
10 defined by said composition time stamps,

characterised in that, for at least one of said encoded entities, said decoding step is anticipated with respect to said composition time stamp, if a composition context associated with said encoded entity  
15 verifies at least one predetermined criterion.

2. Reproduction method according to claim 1, characterised in that it implements a step consisting of comparing a current composition context and said composition context associated with said encoded  
20 entity, and said decoding step is anticipated when said comparison is positive.

3. Reproduction method according to any of claims 1 and 2, characterised in that said entities decoded by anticipation are stored in memory by said  
25 client terminal until said composition step.

4. Reproduction method according to claim 2, characterised in that, in the case of a negative comparison, said encoded entity is stored in memory in said client terminal, and said decoding step is

implemented at said time defined by said associated composition time stamp.

5        5. Reproduction method according to claims 2 and 3, characterised in that, for at least some of said entities decoded by anticipation, said comparison step is repeated, prior to said composition step, and said composition step is implemented when said second comparison is positive.

10       6. Reproduction method according to claim 5, characterised in that, when said second comparison is negative, said method implements an error handling step.

15       7. Reproduction method according to any of claims 1 to 6, characterised in that a decoding order data item is also associated with at least some of said encoded entities.

      8. Reproduction method according to claim 7, characterised in that said decoding order data item is a decoding time stamp.

20       9. Reproduction method according to any of claims 1 to 8, characterised in that said data flow belongs to the group comprising :

- video flows ;
- description flows of a graphic scene with at least two dimensions ;
- audio flows ;
- description flows of an object with at least two dimensions ;
- animation flows of at least one object ;
- 30       - metadata description flows.

10. Reproduction method according to any of claims 1 to 9, characterised in that the format of said encoded entities belongs to the group comprising :

- MPEG media formats ;
- 5       - MPEG-7 data description formats ;
- BIFS scene description formats ;
- H26L formats.

11. Device to reproduce at least one data flow comprising a plurality of encoded entities, each associated with at least one composition time stamp, said device comprising :

- means to decode said flow(s), making it possible to obtain at least one decoded flow comprising a plurality of decoded entities ;
- 15       - means to compose said decoded entities, implemented at the times defined by said composition time stamps,

characterised in that, for at least one of said encoded entities, said decoding means are activated prior to said composition time stamp, if a composition context associated with said encoded entity verifies at least one predetermined criterion.

12. Reproduction device according to claim 11, characterised in that it also comprises :

- 25       - a decoding buffer memory, wherein said encoded entities are stored in increasing order of decoding ;
- a composition buffer memory, wherein said decoded entities are stored in memory.

13. Device according to claim 12, characterised in that said decoded entities are stored in memory in said

composition buffer memory in increasing composition time stamp order.

14. Device according to claim 12, characterised in that said decoded entities are stored in memory in said  
5 composition buffer memory in increasing order of decoding.

15. System to transmit at least one data flow from a data server to at least one client terminal,

said server comprising means to encode said data  
10 flow, in the form of a plurality of encoded entities, each associated with at least one composition time stamp,

said client terminal comprising :

- means to decode said flow(s), making it possible  
15 to obtain at least one decoded flow comprising a plurality of decoded entities ;

- means to compose said decoded entities, implemented at the times defined by said composition time stamps,

20 characterised in that, for at least one of said encoded entities, said decoding means are activated prior to said composition time stamp, if a composition context associated with said encoded entity verifies at least one predetermined criterion.

25 16. Signal representing a data flow intended to be reproduced by at least one reproduction device according to any of claims 11 and 14, said signal being available at the output of said decoding means and supplying said composition means of said device,

30 characterised in that it comprises a plurality of entities of said flow, each comprising :

- a composition time stamp ;
  - an *isdecod* marker, specifying whether said entity was decoded in an anticipated manner ;
- and, when said *isdecod* marker takes a first value,
- 5 said entity is in encoded form and, when said *isdecod* marker takes a second value, said entity is in decoded form and also comprises :
- data items, referred to as *presStruct*, relating to a reproduction structure of said entity ;
- 10 - data items, referred to as *decodInfo*, relating to the decoding of said entity.